

Application Serial No. 09/877,226

Attorney Docket No. 57761.000137

REMARKS

Claims 1-22 are pending in the application. By this Amendment, the drawings, specification and claims 17-21 and 22 are amended. Reconsideration and allowance in view of the foregoing amendments and following remarks are respectfully requested.

I. The Objection to the Drawings

The Office Action objects to the drawings under 37 C.F.R. 1.84(p)(5) asserting that the drawings should include the reference sign "104". As set forth in the attached Request For Approval Of Drawings Corrections, the drawings have been amended in response to the objection to the drawings. Specifically, the drawings have been amended in response to the Office Action to label the client devices 104, including adding a numerical identifier "104" and leader line. It is respectfully submitted that the drawings now satisfy all formal requirements.

II. The Objection to the Disclosure

The Office Action objects to the disclosure asserting various informalities. The specification is hereby amended in response to the asserted deficiencies. It is respectfully submitted that the specification now satisfies all formal requirements.

III. The Objection to the Claims

The Office Action also objects to the claims asserting various informalities. The claims are hereby amended in response to the asserted deficiencies. It is respectfully submitted that the claims now satisfy all formal requirements.

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IV. The Claims Define Patentable Subject MatterA. The Rejection of Claims 1, 3-5, 10, 12, 14-16 and 21

The Office Action rejects claims 1, 3-5, 10, 12, 14-16 and 21 under 35 U.S.C. 102(e) as unpatentable over U.S. Patent 6,236,332 to Conkright et al. (Conkright). This rejection is respectfully traversed.

Claim 1 recites a system for monitoring a utility substation comprising monitoring equipment operatively connected to a utility substation for monitoring operating conditions of the utility substation; the monitoring equipment being operatively connected to an application service provider through a first communication network; one or more network interface devices operatively connected to the application service provider by a second communication network for receiving notification of operating conditions of the utility substation monitored by the monitoring equipment. It is respectfully submitted that the applied art fails to teach the claimed features and in particular the application service provider, including the interrelationship between the claimed features.

The Office Action asserts that Conkright discloses a control and monitoring system comprising monitoring equipment (i.e. one or more remote units), operatively connected to a device such as a utility system, that measures the operating current of the device; and that Conkright discloses operatively connecting the monitoring equipment to a host computer through a first communication network (i.e. wireless service gateway with subscriber software), as well as operatively connecting a remote customer interface terminal to the host computer through the same wireless service gateway and subscriber software, or the Internet wherein the remote

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customer interface receives notification of operating conditions of the monitored utility device as well as allows the user to control the monitored device. The Office Action further asserts that Conkright also discloses that the host computer contains a server database that is connected to the communication networks and accessible by the customer interface.

In particular, the Office Action asserts that although not specifically disclosed, it is considered inherent that in order for the customer subscriber to communicate with the host computer and server database there must be some corresponding protocol at the host computer and therefore the access to this protocol is implemented using an application service provider (see FOLDOC: Free On-Line Dictionary of Computing, Definition of "application service provider"). These assertions are adamantly traversed. Applicant submits that the claimed use of an "application service provider" is in no way inherent in the teachings of Conkright.

Conkright teaches for example, in column 3, lines 21-43, a control and monitoring system 20 which utilizes two-way wireless communications. Conkright describes that Fig. 1 depicts this control and monitoring system 20 and shows the data communication links between a host computer 22, customers 24, and each remote unit 26 of the Conkright invention. Each customer 24 is capable of communicating with the host computer 22 through the Internet 28, subscriber software 30, or through other communication media including, but not limited to, a direct dial-up phone line, facsimile, paging, e-mail, or even human-to-human contact.

Conkright teaches that the subscriber software 30 is adapted for each application (e.g., monitoring utilities, monitoring traffic flow, monitoring lighting, etc.), and *the customers 24 install the software on a personal computer (PC) at their home or office*. This gives the

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customers desktop control of their applications and allows the customers to create a database on their computers for each remote unit within their particular application. Conkright describes that data is preferably transmitted between each customer's computer and the host computer 22 via telephone lines and modems.

This teaching, as well as the other disclosure of Conkright, in no way teaches or suggests the claimed invention including an application service provider. In particular, the disclosure of *the customers 24 install the software on a personal computer (PC) at their home or office* would teach one of ordinary skill in the art away from the claimed application service provider, i.e., such arrangement goes against the need for an application service provider.

Further, referring to the cited web page, FOLDOC: Free On-Line Dictionary of Computing, (FOLDOC) and the provided definition of "application service provider", FOLDOC indicates that an ASP is a service that provides remote access to an application program across a network protocol, and that a common example is a web site that other web sites use for accepting payment by credit card as part of their online ordering systems.

For purposes of argument herein, Applicant acknowledges such definition of an "application service provider (ASP)". However, even given that FOLDOC's definition is an accurate characterization of an ASP, Applicant submits that it is in no way inherent, or in any way suggested, to use an ASP in the system of Conkright. The Office Action is essentially asserting that it is inherent that there be access to an application program across a network environment. Such access is clearly not inherent. Further, Conkright teaches directly against

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such arrangement by asserting that customers install the software on a personal computer at their home or office (column 3, line 37).

Further, the assertion in the Office Action that it is considered "inherent that in order for the customer subscriber to communicate with the host computer and server database there must be some corresponding protocol at the host computer" sounds of an Internet Service Provider (ISP). An Internet Service Provider, even if inherent in the system of Conkright, would be different from and in no way suggest the claimed "application service provider".

Accordingly, it is respectfully submitted that claim 1 defines patentable subject matter for the reasons set forth above. Further, it is submitted that claim 12 defines patentable subject matter for reasons similar to those set forth with respect to claim 1.

Further, dependent claims 3-5, 10, 14-16 and 21 define patentable subject matter based on their various dependencies on such independent claims, as well as the additional features such dependent claims recite. Withdrawal of the rejection under 35 U.S.C. §103 is respectfully requested.

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B. The Rejection of Claims 2 and 13

Claims 2 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Conkright in view of U.S. Patent No. 5,406,495 to Hill. This rejection is respectfully traversed.

Hill is directed to substation load distribution monitor system. The Office Action asserts that Conkright teaches all of the features of the claimed invention except for including monitoring equipment for measuring the voltage of the utility device. The Office Action attempts to cure the deficiencies of Conkright with the teachings of Hill.

Specifically, the Office Action asserts that Hill teaches a substation load distribution monitoring system comprising remote data units for sensing operating conditions of the power equipment (column 3, lines 20-29) including periodic voltage and current data (column 1, lines 48-55); and that Hill also teaches that the remote data units communicate with a host computer over a communication network to transfer measured data (column 3, lines 4-17).

The Office Action further asserts that it would have been obvious to one having ordinary skill in the art to modify the invention of Conkright to include monitoring equipment for measuring the voltage of the utility device, as taught by Hill, because Conkright teaches a system for use in a plurality systems including a system employing condition monitoring over an AC power line (column 7, lines 9-11) and Hill suggests that the combination would have provided an improved-accuracy and simplified method of remote monitoring in a power system (column 1, lines 7-15), and therefore provided higher protection, by monitoring the voltage and current rather than just the current (column 6, lines 48-66).

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However, it is respectfully submitted that even if it were obvious to somehow combine the teachings of Conkright with Hill, such combination would fail to teach or suggest the invention of claims 1 and 12. Specifically, the features of claims 1 and 12 include the feature of the "application service provider" as discussed above. Conkright fails to teach or suggest such claimed feature. Further, the disclosure of Hill and the asserted combination in the Office Action fail to cure this deficiency.

Accordingly, it is respectfully submitted that the applied art, either alone or in combination, fails to teach or suggest the features as set forth in claims 1 and 12. Thus, dependent claims 2 and 13 define patentable subject matter based on their various dependencies on such independent claims 1 and 12, as well as the additional features such dependent claims recite. Withdrawal of the rejection under 35 U.S.C. §103 is respectfully requested.

C. The Rejection of Claims 7-9 and 18-20

Claims 7-9 and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Conkright in view of U.S. Patent No. 6,006,171 to Vines et al. (Vines). This rejection is respectfully traversed.

Vines is directed to a dynamic maintenance management system. The Office Action asserts that Conkright teaches all of the features of the claimed invention except for including automatic reporting, maintenance scheduling, and administrative tracking programs in the customer interface device. The Office Action attempts to cure such deficiencies of Conkright with the teachings of Vines.

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Specifically, the Office Action asserts that Vines teaches a dynamic maintenance management system comprising a monitoring and analysis process for sending and receiving process control data to and from sensors and devices over a communication bus (column 3, lines 33-37); and that Vines teaches sending this information to a DMM configurator that processes the information (column 3, lines 53-65) to automatically provide reports describing device operation, preventive maintenance schedules, and administrative tracking (i.e. creating work orders including worker assignment) (column 5, lines 17-29 and 50-61 and Figures 3-9).

In the Office Action, the Office Action asserts that it would have been obvious to one having ordinary skill in the art to modify the invention of Conkright to include automatic reporting, maintenance scheduling, and administrative tracking programs in the customer interface device, as taught by Vines, because *Conkright does include presenting information to a worker for fixing a fault that has occurred (column 9, lines 15-34)*, and, as suggested by Vines, the combination would have provided more detailed information to allow an operator to make better informed decisions and devise proactive planning, increased performance and predictability of equipment and operations, reduced maintenance costs, improved reliability, and avoided costly failures (column 2, lines 12-31 and column 5, lines 30-34).

However, it is respectfully submitted that even if it were obvious to somehow combine the teachings of Conkright with Vines, such combination would fail to teach or suggest the invention of claims 1 and 12. Specifically, the features of claims 1 and 12 include the feature of the "application service provider" as discussed above. Conkright fails to teach or suggest such

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claimed feature. Further, the disclosure of Vines and the asserted combination in the Office Action fail to cure this deficiency.

Further, it is respectfully submitted that the motivation set out in the Office Action for the combination is deficient. That is, the Office Action asserts that Conkright does include presenting information to a worker for fixing a fault that has occurred (column 9, lines 15-34).

Applicant submits that Conkright teaches that after a failure of an operating condition has been determined and located by the unit, such as an inoperative bulb in the case of use of the system in a signboard application, a worker or serviceman is sent to the site; and that once there, he can press the service button 90, causing all relays within the unit to close and activate the electrical apparatus for one hour. Conkright further teaches that the serviceman can then determine which apparatus has failed and remedy the problem by opening the circuit breaker, replacing the apparatus, and then closing the breaker.

However, it is submitted that these teachings fall short of the assertions in the Office Action indicating that Conkright teaches "presenting information to a worker for fixing a fault that has occurred." Conkright simply does not support such teaching.

Accordingly, it is respectfully submitted that the applied art, either alone or in combination, fails to teach or suggest the features as set forth in claims 1 and 12. Thus, dependent claims 7-9 and 18-20 define patentable subject matter based on their various dependencies on such independent claims, as well as the additional features such dependent claims recite. Withdrawal of the rejection under 35 U.S.C. §103 is respectfully requested.

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D. The Rejection of Claims 6 and 17

Claims 6 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Conkright in view of U.S. Patent No. 5,712,896 to Lee et al. (Lee). This rejection is respectfully traversed.

Lee is directed to a method of diagnosing a fault of a digital exchanger. The Office Action asserts that Conkright teaches all of the features of the claimed invention except for an expert database. The Office Action attempts to cure the deficiencies of Conkright with the teachings of Lee.

Specifically, the Office Action asserts that it would have been obvious to one having ordinary skill in the art to modify the invention of Conkright to include an expertise database, as taught by Lee, because, as suggested by Lee, the combination would have provided a method for determining the type of fault that has occurred without the need of an expert in the field by providing interactive questions that guide the user through the process, and therefore allowed the diagnosis to be conducted immediately by an unskilled worker.

However, it is respectfully submitted that even if it were obvious to somehow combine the teachings of Conkright with Lee, such combination would fail to teach or suggest the invention of claims 1 and 12. Specifically, the features of claims 1 and 12 include the feature of the "application service provider" as discussed above. Conkright fails to teach or suggest such claimed feature. Further, the disclosure of Lee (even if Lee teaches such expert database) and the asserted combination in the Office Action fail to cure this deficiency.

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Accordingly, it is respectfully submitted that the applied art, either alone or in combination, fails to teach or suggest the features as set forth in claims 1 and 12. Thus, dependent claims 6 and 17 define patentable subject matter based on their various dependencies on such independent claims, as well as the additional features such dependent claims recite. Withdrawal of the rejection under 35 U.S.C. §103 is respectfully requested.

E. The Rejection of Claims 11 and 22

Claims 11 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Conkright in view of Hill, Vines, Lee, and International Publication Number WO 00/04427 to Parsons (Parsons). This rejection is respectfully traversed.

The teachings of Hill, Vines and Lee are discussed above. Parsons is directed to an apparatus that allows for the monitoring and control of an electrical appliance or a utility. Parsons explains that this is achieved by using a master web server that can communicate with remote slave nodes using a protocol for control and automation over networks of different media.

The Office Action asserts that Conkright teaches many of the features of the claimed invention including specifying that the host computer connect to the customer interface through the Internet, but does not teach including monitoring equipment for measuring the voltage of the utility device, including automatic reporting, maintenance scheduling, and administrative tracking programs, including an expertise database, or specifying that the connection between the monitoring equipment and the host computer be the Internet. The Office Action in turn applies each of the applied art, as discussed above.

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In particular, the Office Action asserts that Parsons teaches an internet utility interconnect means, and corresponding method, comprising operating a remote control and monitoring system that replicates data between a host computer located at a central server site and a set of automation nodes located at a remote site wherein the means to link the data collected for subsequent access is through the Internet (page 6, lines 15-32). Further, the Office Action asserts that it would have been obvious to one having ordinary skill in the art to modify the invention of Conkright to include specifying that the connection between the monitoring equipment and the host computer be the Internet, as taught by Parson, because, as suggested by Parsons, the combination would have allowed the web server to be changed by authorized users and therefore enabled residents and other subscribers to conveniently turn on the connected devices whenever desired.

However, it is respectfully submitted that even if it were obvious to somehow combine the teachings of Conkright with the applied art, such combination would fail to teach or suggest the invention of claims 11 and 22, for the same reasons as discussed above with respect to claims 1 and 12. Specifically, the features of claims 1 and 12 include the fundamental feature of the "application service provider" as discussed above. Conkright fails to teach or suggest such claimed feature. Further, the disclosure of Parsons and the other applied art, and the asserted combination in the Office Action, fail to cure this deficiency. Such application service provider is in no way inherent in the teachings of Conkright.

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Accordingly, it is respectfully submitted that the applied art, either alone or in combination, fails to teach or suggest the features as set forth in claims 11 and 22. Withdrawal of the rejection under 35 U.S.C. §103 is respectfully requested.

V. Conclusion

For at least the reasons outlined above, Applicant respectfully asserts that the application is in condition for allowance. Favorable reconsideration and allowance of the claims are respectfully solicited.

Should the Examiner believe anything further is desirable in order to place the application in even better condition for allowance, the Examiner is invited to contact Applicant's undersigned representative at the telephone number listed below.

For any fees due in connection with filing this Response the Commissioner is hereby authorized to charge the undersigned's Deposit Account No. 50-0206.

Respectfully submitted
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Attachments:

Request for Approval of Drawing Corrections with Fig. 1
Appendix

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AppendixMarked Up Version Of Replacement Paragraphs As Per 37 C.F.R. § 1.121

Paragraphs [0005], [0015], [0017], [0018], [0030] have been rewritten as follows:

[0005] A system and method for addressing the above problems and other problems may be provided by using ~~a system~~ a system for monitoring a utility substation. The system for monitoring a utility substation includes monitoring equipment, connected to a utility substation, for monitoring operating conditions of the utility substation. The monitoring equipment is connected to an application service provider through a first communication network. One or more network interface devices are connected to the application service provider by a second communication network, which may be the same communication network as the first communication network. The one or more network interface devices receive notification of operating conditions of the utility substation monitored by the monitoring equipment through the application service provider.

[0015] One or more servers 106 may control the communications network 102, and may generally serve as a communications link between the staff 104, the substations 100, and other entities or systems. The servers 106 may comprise any networking platform running any suitable operating system or network protocol. The servers 106 may be or include, for instance, workstations running the Microsoft Windows™ NT™, Windows™ 2000, ~~Unix~~Unix™, ~~Linux~~Linux™, ~~Xenix~~Xenix™, IBM AIX™, Hewlett-Packard UX™, Novell Netware™, Sun Microsystems Solaris™, OS/2™, BeOS™, ~~Mac~~Mach™, ~~Apache~~Apache™, OpenStep™ or other operating system or platform. In the embodiments described herein, the servers 106 are described as performing certain tasks, however it should be understood that some or all of these tasks may be performed by network interface devices 126 operated at the substations 100 or by the client devices 104, or by other entities.

[0017] Substation network interface devices 126 at the substation 100 and the client devices 104 may be or include, for instance, personal computers running the Microsoft

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Windows™ 95, 98, Millenium™, NT™, 2000 or XP™, Windows™CE™, PalmOS™, Unix™, Linux, Solaris™, OS/2™, BeOS™, Mac OS™, VAX VMS or other operating system or platform. Each network interface device 126 may include a microprocessor such as an Intel x86-based or Advanced Micro Devices x86-compatible device, a Motorola 68K or PowerPC™ device, a MIPS, Hewlett-Packard Precision™, or Digital Equipment Corp. Alpha™ RISC processor, a microcontroller or other general or special purpose device operating under programmed control. Each network interface device 126 may furthermore include electronic memory such as RAM (random access memory) or EPROM (electronically programmable read only memory), storage such as a hard drive, CDROM or rewritable CDROM or other magnetic, optical or other media, and other associated components connected over an electronic bus, as will be appreciated by persons skilled in the art.

[0018] The substations 100, servers 106, and client devices 104 may communicate with one another using any number of systems. For example, they may send or receive messages to one another using Internet Protocol (IP) or Internet Protocol Next Generation (IPng) code or data, Hyper text Markup Language (HTML), Dynamic HTML, Extensible Markup Language (XML), Extensible Stylesheet Language (XSL), Document Style Semantics and Specification Language (DSSSL), Cascading Style Sheets (CSS), Synchronized Multimedia Integration Language (SMIL), Wireless Markup Language (WML), Java™, Jini™, C, C++, Perl, UNIX Shell, Visual Basic™ or Visual Basic Script, Virtual Reality Markup Language (VRML), ColdFusion™, Common Gateway Interface (CGI), servers, peer-to-peer networking code or other compilers, assemblers, interpreters or other computer languages or platforms. In a preferred embodiment, the various entities communicate with one another using an Internet-based language that employs simple and familiar interface devices, such as a HTML-based language operating through Internet software such as Microsoft's Explorer™.

[0030] In one embodiment of the invention, when a fault is detected, the servers 106 notify the appropriate members of the personnel operating the client devices 104 through network 102. In order to provide instant notification of a fault, the servers 106 may notify client

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devices 104, such as a pager 108 or cellular telephone monitored by maintenance personnel. By using such an instant notification system, the personnel may attend other activities without having to constantly monitor the operation of the system to quickly detect faults. In addition, a signal may be transmitted to other client devices ~~126,104~~ being operated by other personnel, and the substation network interface devices 126 so as to notify them that a fault has occurred. In one embodiment, such a signal may trigger a visual alert to display or cause an audible alarm to sound. Such a signal may provide visual and audible warnings on an internet web browser on the client devices 104 and the substation network interface devices 126. Once notified, maintenance personnel can quickly pinpoint the substation raising the alarm by referring to, for example, an internet-based web browser utility programmed to display the location and details of the alarm in a user interface. In one embodiment, the user interface may include a plurality of interactive screens that allow the personnel to view various operating conditions of the substations, and which may be programmed to respond to the user's input to cause the server 106 to query the substations network interface devices 126 to obtain further operating conditions ~~form~~from the monitoring devices.

Marked Up Version Of Replacement Claims As Per 37 C.F.R. § 1.121(c)

Claims 17-21 and 22 have been rewritten as follows:

17. (Once amended) The method of claim ~~12~~, further comprising the step of incorporating an expertise database into at least one of the one or more network interface devices and the application service provider.
18. (Once amended) The method of claim ~~12~~, further comprising the step of incorporating a reporting system for automatically generating reports relating to the operation of at least one of the utility substations into at least one of the one or more network interface devices and the application service provider.

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19. (Once amended) The method of claim 1, further comprising the step of incorporating a scheduling program for scheduling maintenance operations for at least one of the utility substations into at least one of the one or more network interface devices and the application service provider.
20. (Once amended) The method of claim 1, further comprising the step of incorporating an administrative tracking program for providing administrative functions for at least one of the utility substations into at least one of the one or more network interface devices and the application service provider.
21. (Once amended) The method of claim 1, further comprising the step of incorporating a remote operation module for remotely operating at least one of the substations into at least one of the one or more network interface devices and the application service provider.
22. (Once amended) A method for monitoring a utility substation comprising the steps of:
operatively connecting monitoring equipment, comprising one or more devices for measuring the voltage and current in an electrical power utility substation, to a utility substation for monitoring operating conditions of the utility substation;
operatively connecting the monitoring equipment to an application service provider through a first communication network;
operatively connecting one or more network interface devices to the application service provider by a second communication network for receiving notification of operating conditions of the utility substation monitored by the monitoring equipment,
wherein the first and second communication networks are the Internet,
~~wherein the first communication network and the second communication network comprise the same network;~~

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operatively connecting an equipment database to at least one of the first and second communication networks the equipment database being accessible by one or more of the application service provider and the one or more network interface devices;

incorporating an expertise database into at least one of the one or more network interface devices and the application service provider;

incorporating a reporting system for automatically generating reports relating to the operation of at least one of the utility substations into at least one of the one or more network interface devices and the application service provider;

incorporating a scheduling program for scheduling maintenance operations for at least one of the utility substations into at least one of the one or more network interface devices and the application service provider;

incorporating an administrative tracking program for providing administrative functions for at least one of the utility substations into at least one of the one or more network interface devices and the application service provider; and

incorporating a remote operation module for remotely operating at least one of the substations into at least one of the one or more network interface devices and the application service provider.

- END OF APPENDIX -